

Construction Management and Engineering Competency 2.17

Competency 2.17 Construction management and engineering personnel shall demonstrate a working level knowledge of Department of Energy (DOE) Order 5480.9A, *Construction Project Safety and Health Management*.

1. Supporting Knowledge and Skills

- a. Discuss the project manager/construction manager responsibilities set forth in DOE Order 5480.9A, *Construction Project Safety and Health Management*.
- b. Discuss the construction contractor's responsibilities under DOE Order 5480.9A, *Construction Project Safety and Health Management*, for each of the following:
 - Establishing a safety program
 - Worksite presence during work activities
 - Compliance by subcontractors
- c. Discuss the requirements for the performance of a Preliminary Hazard Analysis (PHA) and an Activity Hazard Analysis (AHA). Include in the discussion each of the following elements:
 - Responsibility for the performance of these analyses
 - Purpose and content of the analyses
 - When the analyses are required to be performed
- d. Discuss the contractor's responsibility for providing necessary training for employees in the area of safety and health on the worksite.
- e. Discuss the construction manager's responsibility for on-site safety and health inspections.
- f. Discuss the contractor's required response to an identified safety or health hazard.

Construction Management and Engineering Competency 2.17

2. Self-Study Activities (corresponding to the intent of the above competency)

Below are two web sites containing many of the references you may need.

Web Sites		
Organization	Site Location	Notes
Department of Energy	http://wastenot.inel.gov/cted/stdguido.html	DOE Standards, Guides, and Orders
OSHA	http://www.osha-slc.gov/	OSHA documents and search engine
U.S. House of Representatives	http://law.house.gov/cfr.htm	Searchable Code of Federal Regulations

Read the summary section of this competency.

Review DOE Order 5480.9A, *Construction Project Safety and Health Management*.

EXERCISE 2.17-A What is the general project manager's/construction manager's responsibility as set forth in DOE Order 5480.9A, *Construction Project Safety and Health Management*? NOTE: It is not necessary to detail the specific responsibilities.

EXERCISE 2.17-B Discuss the construction contractor's responsibilities under DOE Order 5480.9A, *Construction Project Safety and Health Management* for each of the following:

- Establishing a safety program
- Worksite presence during work activities
- Compliance by subcontractors

EXERCISE 2.17-C Discuss the requirements for the performance of a Preliminary Hazard Analysis (PHA) and an Activity Hazard Analysis (AHA). Include in the discussion each of the following elements:

- Responsibility for the performance of these analyses
- Purpose and content of the analyses
- When the analyses are required to be performed

EXERCISE 2.17-D Discuss the contractor's responsibility for providing necessary training for employees in the area of safety and health on the worksite.

Construction Management and Engineering Competency 2.17

EXERCISE 2.17-E Discuss the project manager's/construction manager's responsibility for onsite safety and health inspections.

EXERCISE 2.17-F Discuss the contractor's required response to an identified safety or health hazard.

3. Summary

The Occupational Safety and Health Act (OSHA) became effective on April 28, 1971. The Act grants the Secretary of Labor the authority to promulgate, revise, and revoke safety and health standards; to inspect, investigate, and to issue citations; and to require employers to keep records of safety and health data. This authority includes a shared responsibility with other federal agencies for the adequacy of programs in the organizations reporting to them. The general provisions of the Act require each employer to furnish to each employee a place of employment free from recognized hazards, and to comply with occupational safety and health standards. DOE has recognized Title 29, Code of Federal Regulations, Part 1960 (29 CFR 1960) and OSHA requirements to be minimum standards for federal employees.

DOE Order 5480.9A, *Construction Project Safety and Health Management*, establishes the specific requirements for the management of occupational safety and health on Department of Energy (DOE) construction projects. OSHA standards and regulations such as 29 CFR 1910, *Occupational Safety and Health Standards*, and 29 CFR 1926, *Safety and Health Regulations for Construction*, are important documents for construction management and engineering personnel.

4. Exercise Solutions

EXERCISE 2.17-A What is the general project manager's/construction manager's responsibility as set forth in DOE Order 5480.9A, *Construction Project Safety and Health Management*? It is not necessary to detail the specific responsibilities for this exercise; state only the major responsibility.

ANSWER 2.17-A "The project manager is responsible and accountable for management of the construction project and for providing project oversight to ensure compliance by the construction contractor with the safety and health program requirements." (DOE Order 5480.9A, Section 9.b.)

Construction Management and Engineering Competency 2.17

EXERCISE 2.17-B Discuss the construction contractor's responsibilities under DOE Order 5480.9A, *Construction Project Safety and Health Management*, for each of the following:

- Establishing a safety program
- Worksite presence during work activities
- Compliance by subcontractors

ANSWER 2.17-B Your response should be similar to the one shown in this matrix.

Construction Contractor Responsibilities Under DOE Order 5480.9A	
Responsibility	Requirement
Establishing a safety program	"The construction contractor shall establish and maintain a program to protect the safety and health of all persons on the construction worksite to include his or her employees, employees of other contractors or subcontractors, visitors and the public. This program also shall protect against damage to property, materials, supplies, and equipment and prevent unnecessary work interruptions. The program shall ensure compliance by the construction contractor and all worksite subcontractors with the safety and health standards prescribed in the construction project acquisition documents." (DOE Order 5480.9A, Section 10)
Worksite presence during work activities	<p>"The construction superintendent or other duly designated contractor representative must be present on the worksite during the performance of any project work activities." (DOE Order 5480.9A, Section 10.a.(2))</p> <p>"During periods of active construction, the construction contractor shall conduct daily inspections of the worksite to identify hazards and instances of noncompliance with project safety and health requirements." (DOE Order 5480.9A, Section 11.a.)</p>

Construction Management and Engineering Competency 2.17

Construction Contractor Responsibilities Under DOE Order 5480.9A	
Responsibility	Requirement
Compliance by subcontractors	<p>“The construction contractor shall establish and maintain a program to protect the safety and health of all persons on the construction worksite to include his or her employees, employees of other contractors or subcontractors, . . . ” (DOE Order 5480.9A, Section 10)</p> <p>“The construction contractor is responsible for ensuring compliance by all project subcontractors with project safety and health requirements. The construction contractor is further responsible for coordinating with project subcontractors . . . those occupational safety and health program elements addressing worksite hazards to which employees of other contractors may be exposed.” (DOE Order 5480.9A, Section 10.a.(4))</p>

- EXERCISE 2.17-C Discuss the requirements for the performance of a Preliminary Hazard Analysis (PHA) and an Activity Hazard Analysis (AHA). Include in the discussion each of the following elements:
- Responsibility for the performance of these analyses
 - Purpose and content of the analyses
 - When the analyses are required to be performed

ANSWER 2.17-C “The construction contractor shall evaluate the work associated with each project phase to identify hazards to which worksite employees and other worksite personnel may potentially be exposed and to identify appropriate control measures. The construction contractor shall accomplish this through the performance of preliminary and activity hazard analyses as outlined below.” (DOE 5480.9A, Section 10.b.)

Preliminary Hazard Analysis (PHA)

- It is the responsibility of the construction contractor to prepare the PHA and the construction manager to approve the PHA.
- The PHA must be approved prior to commencement of work on the project.
- The PHA identifies specific hazards and appropriate control measures.

Construction Management and Engineering Competency 2.17

- The PHA must identify the anticipated construction phases; the types of hazards associated with each phase and the potential control measures and programs. It must identify the phases of the project for which DOE-prescribed occupational safety and health standards or the construction project acquisition documents require that protective measures be designed, inspected, or approved by a professional engineer or other competent person.

Activity Hazard Analysis (AHA)

- The AHA is also the responsibility of the construction contractor to prepare and the construction manager to approve.
- The AHA must also be approved prior to commencement of work on the project except where the PHA fulfills the requirement for an AHA.
- The AHA expands upon the PHA and must identify the specific hazards associated with each activity to be performed in each phase and the actual control measures and programs planned to control the hazards. It must include drawings and/or other documentation for all protective measures for which the acquisitions documents or applicable occupational safety and health standards so prescribe. It must designate and identify the qualifications of the competent person or professional engineer that will conduct the inspections where so required.

EXERCISE 2.17-D Discuss the contractor's responsibility for providing necessary training for employees in the area of safety and health on the worksite.

ANSWER 2.17-D “The construction contractor shall ensure that each employee entering the worksite has, through experience, training, and where required, certification, the skills and knowledge necessary to safely perform his other assigned tasks. In addition, the contractor shall ensure that each employee receives initial worksite safety and health orientation and continued safety and health training addressing the hazards associated with the work and the measures necessary to control or eliminate the hazards.” (DOE Order 5480.9A, Section 10.c.)

Construction Management and Engineering Competency 2.17

EXERCISE 2.17-E Discuss the project manager's/construction manager's responsibility for onsite safety and health inspections.

ANSWER 2.17-E While many safety and health requirements are delegated to the contractor, the primary responsibility for on-site safety and health rests with the project manager. "The project manager is responsible and accountable for management of the construction project and for providing project oversight to ensure compliance by the construction contractor with the safety and health program requirements." (DOE Order 5480.9A, Section 9.b.)

"The project manager shall conduct inspections of all construction projects exceeding \$500,000 on at least a monthly basis during periods of active construction. For projects under \$500,000, the project manager shall develop and implement an inspection schedule which ensures that a representative sample of ongoing construction projects is inspected on at least a monthly basis. This shall be achieved both through a walk-around inspection of the worksite and through a review of the project safety and health plan and other safety and health program documentation. Findings of these inspections shall be documented in the project files." (DOE Order 5480.9A, Section 11.c.)

EXERCISE 2.17-F Discuss the contractor's required response to an identified safety or health hazard.

ANSWER 2.17-F "The construction contractor shall take immediate corrective action to eliminate or control all identified hazards.

Where immediate correction is not possible or the responsibility for abatement falls outside the scope of the project, the construction contractor has four other responsibilities. They include notification of affected employees, posting warning signs, implementing further interim control measures, and notifying the construction manager and other responsible authorities. Corrective actions are to be performed in accordance with the hazard abatement methodology prescribed in DOE Order 5483.1A, *Occupational Safety and Health Program for DOE Contractor Employees at Government-Owned, Contractor-Operated Facilities*." (DOE Order 5480.9A, Section 11.d.)